

REMARKS

The claim 19 objection has been cured in a new claim by correcting the spelling to "hypophosphite".

The 35 U.S.C. §112, first paragraph objections to claims 17-21 are avoided since the objected to claim language is not present in the new claim 22. Also per the Examiner's suggestion, the previous term "zincate etching" has been changed to "zincate coating" and a corresponding amendment was made to the specification in accordance with the Examiner's suggestion.

The double patenting objection is avoided since only one independent claim is presently presented.

The Examiner rejected previous claims 17 and 21 under 35 U.S.C. §103 as unpatentable over Mizoguchi in view of Gulla.

New claim 22 clearly distinguishes over the primary reference Mizoguchi at least for the following reasons. First, claim 22 recites a nickel-copper-phosphor layer on the outer surface of an aluminum cylindrical metal casing where said casing has a groove structure. Mizoguchi makes no mention of copper anywhere in his disclosure.

Next claim 17 distinguishes at least by reciting applying a conductive layer with a zincate coating after the chemical pre-treating and generating the nickel-copper-phosphor layer by a chemical bath which comprises nickel sulfate of substantially 30 g/l, copper sulfate of substantially 0.6 to 1.5 g/l, sodium hypophosphite of substantially 15 g/l, sodium citrate of substantially 50 g/l, and ammonium chloride of substantially 40 g/l, and wherein the bath has a ph value of substantially 9.0 and a temperature of substantially 75°C. This results in a very advantageous nickel-copper-phosphor deposition layer for a casing for transporting

toner mixture in a development device wherein as pointed out in Applicants' specification at Substitute Specification page 3, the paragraph beginning at line 14 and running through line 27, wherein the outer layer has the following benefits:

1. a required hardness and a lower abrasion so that a higher usage duration results;
2. the layer has a high electrical conductivity whereby advantageous electromagnetic properties result;
3. the electrical resistance of the layer is optimized by the recited bath components resulting in desired alloy ratios for the nickel-copper-phosphor deposition;
4. the alloy layer can only be slightly magnetized or not magnetized at all so that a disadvantageous residual magnetism is avoided;
5. the combination of high electrical conductivity and high hardness leads to the situation that previous aluminum casings can be exchanged for the casing of the invention of claim 22 without electromagnetic or mechanical parameters being changed to a large extent; and
6. an oxidation of the surface is avoided due to the alloy layer.

Mizoguchi does not teach such an inventive combination set forth in claim 22 since he does not even mention copper and the bath components as recited and conditions as recited in combination are nowhere suggested in Mizoguchi.

The Examiner relies on the secondary reference Gulla to satisfy the deficiencies of Mizoguchi. But Gulla has absolutely nothing to do with a casing for transport of a toner mixture wherein the casing has a groove structure on its outer surface having the inventive layer thereat comprising a nickel-copper-phosphor for transporting the toner mixture at said outer surface for the development device. This

is required in claim 17 and Gulla makes no mention whatsoever of toner transport. Gulla is a general reference for creating alloy layers but nowhere teaches how to choose the combination of recited bath components for a toner transport having the above indicated advantages and features. Therefore one skilled in the art consulting the Gulla reference would have no idea how to adjust the bath components to create the desired optimized nickel-copper-phosphor layer with the groove structure for transporting toner. Gulla does not disclose the combination of bath components and parameters as recited but only teaches a whole variety of different alloy combinations without ever relating those alloy combinations to toner transport for a development device.

Allowance of the application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required or to credit any overpayment to account no. 501519.

Respectfully submitted,



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Brett A. Valiquet
Schiff Hardin LLP
Patent Department-6600 Sears Tower
Chicago, Illinois 60606
Telephone: 312-258-5786
Attorneys for Applicants
CUSTOMER NO. 26574